

**NCERT Flying Animals**

1. Flying Fish: *Exocoetia* :- Bony fish
2. Aves (Bird) :- Mostly
3. Flying Fox :- (Pteropus)

**Seeliodon (Dog Fish)**  
Pristis (Saw Fish)  
Carcharodon (Great White Shark)  
Trygon (Sting Ray)  
Torpedo (Electric Ray)

**DOUBLE MEMBRANE BOUND ORGANELLES**

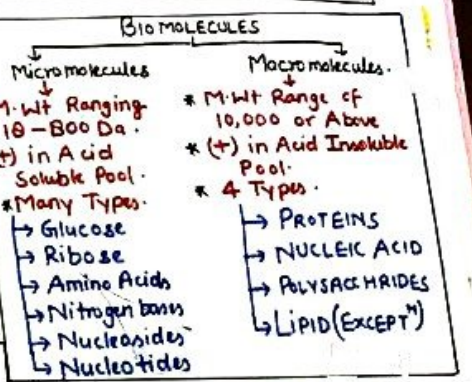
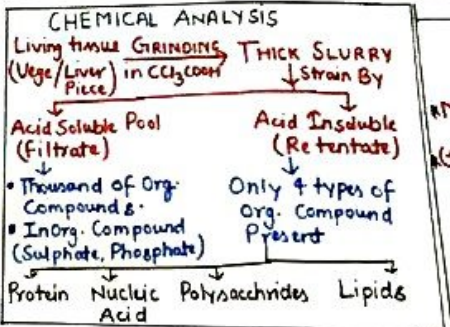
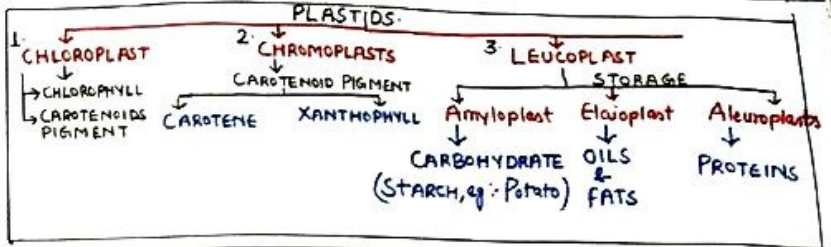
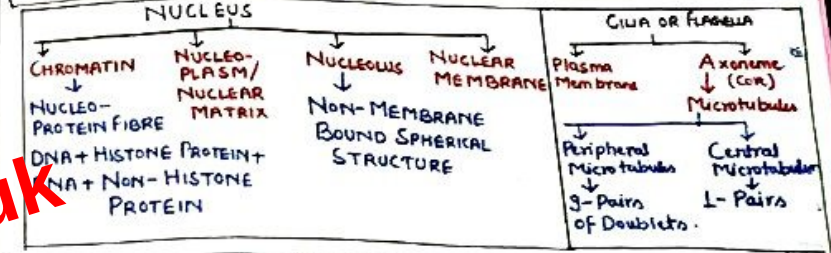
1. CHLOROPLAST/PLASTID
2. MITOCHONDRIA
3. NUCLEUS

**SINGLE MEMBRANE BOUND ORGANELLES**

1. E.R
2. G.B
3. Vacuole
4. Lysosome
5. Micro bodies
6. Thylakoids

**NON-MEM BOUND ORGANELLES**

1. RIBOSOMES
2. CENTROSOME/CENTRIOLE
3. NUCLEOLUS
4. CYTOSKELETAL STRUCTURE

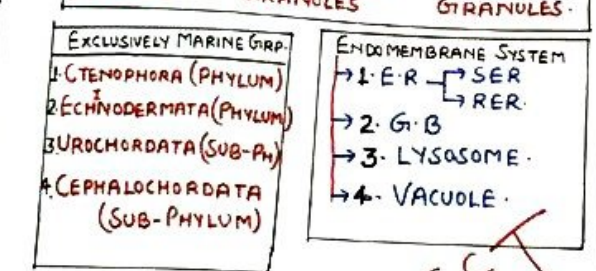


| ELEMENT      | % WEIGHT OF EARTH CRUST | % WEIGHT OF HUMAN BODY |
|--------------|-------------------------|------------------------|
| HYDROGEN H   | 0.14                    | 9.5                    |
| CARBON C     | 0.03                    | 18.5                   |
| OXYGEN O     | 46.6                    | 65.0                   |
| NITROGEN N   | Very Little             | 3.3                    |
| SULPHUR S    | 0.03                    | 0.4                    |
| SODIUM Na    | 2.8                     | 0.2                    |
| CALCIUM Ca   | 3.6                     | 1.5                    |
| MAGNESIUM Mg | 2.1                     | 0.1                    |
| SILICON Si   | 27.7                    | NEGLECT                |

**COMPARISON OF CHORDATES & NON-CHORDATES**

| CHORDATES                                         | NON-CHORDATES                                     |
|---------------------------------------------------|---------------------------------------------------|
| 1. NOTOCHORD PRESENT                              | 1. NOTOCHORD ABSENT                               |
| 2. CENTRAL NER. SYSTEM IS DORSAL, HOLLOW & SINGLE | 2. CENTRAL NERVOUS SYSTEM VENTRAL, DOUBLE & SOLID |
| 3. PHARYNX PERFORATED BY GILL SLOTS               | 3. GILL SLOTS ARE ABSENT                          |
| 4. HEART IS VENTRAL                               | 4. HEART IS DORSAL (IF PRESENT)                   |
| 5. A POST. ANAL TAIL IS PRESENT                   | 5. POST. ANAL TAIL IS ABSENT                      |

- FALSE FISHES**
1. JELLY FISHES - Aurelia - COELENTERATA
  2. CRAY FISHES - Astacus - ARTHROPODA
  3. SILVER FISHES - Lepisma - ARTHROPODA
  4. CUTTLE FISHES - Sepia - MOLLUSCA
  5. DEVIL FISH - Octopus - MOLLUSCA
  6. RAZOR FISH - Solen - MOLLUSCA
  7. SHELL FISH - MOLLUSCA
  8. STAR FISH - Asterias - ECHINODERMATA
  9. HAG FISH - Myxine - CYCLOSTOMATA
  10. WHALE - Balanoptera - MAMMAL



**2° METABOLITES**

|             |                                   |
|-------------|-----------------------------------|
| PIGMENTS    | CAROTENOIDS, ANTHOCYANINS         |
| ALKALOIDS   | MORPHINE, CODEINE                 |
| TERPENOIDS  | MONOTERPENES, DITERPENES          |
| ESSEN. OILS | LEMON GRASS OIL                   |
| TOXINS      | ABRIN, RICIN                      |
| LECTINS     | CONCAVALIN A                      |
| DRUGS       | VINBLASTIN, CURCUMIN              |
| POLYMERIC   | RUBBER, GUM, CELLULOSE SUBSTANCES |

| CARTILAGINOUS FISH               | BONY FISHES                    |
|----------------------------------|--------------------------------|
| 1. Mostly Marine                 | 1. Both Marine & Fresh Water   |
| 2. Endoskeleton is Cartilaginous | 2. Endoskeleton is Bony        |
| 3. Mouth is Ventral              | 3. Mouth is Terminal           |
| 4. Operculum Absent              | 4. Operculum Present           |
| 5. Air bladder Absent            | 5. Air bladder Present         |
| 6. Claspers Present              | 6. Claspers Absent             |
| 7. Sexual Dimorphism (+)         | 7. Sexual Dimorphism (-)       |
| 8. Gill Slits are 5-7 pairs      | 8. Gill Slits are 4 pairs      |
| 9. Scales are Placoid            | 9. Scales are Cycloid, Ctenoid |
| 10. Ureotelic                    | 10. Ammonotelic                |

**NEET**

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